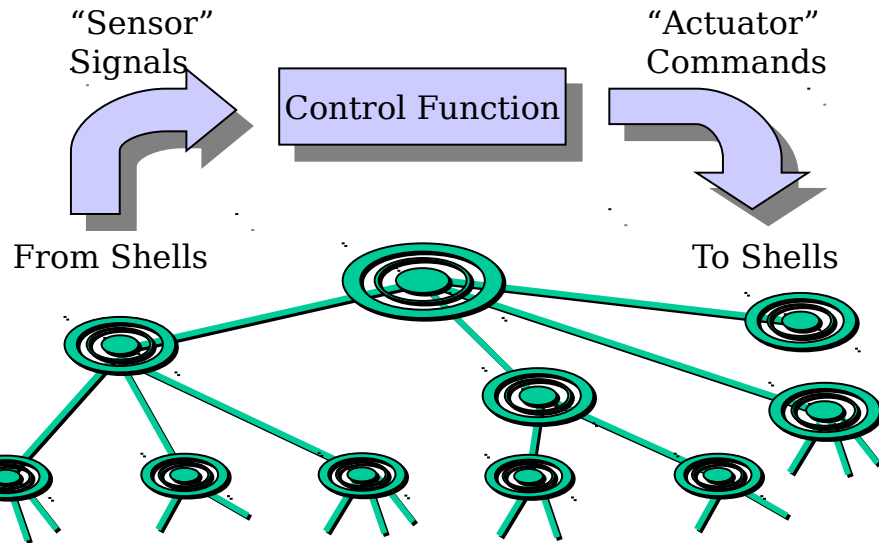


# SURVIVABILITY ARCHITECTURES



## NEW IDEAS

- **Control system architecture for survivability**
  - System-wide survivability viewed as *control application*
  - System response to attack/failure based on *system state*
  - *Hierarchic adaptive control*
- **Control system security**
  - Control system presents major potential vulnerability
  - Control system security including artificial diversity, state refresh, specialized intrusion detection, spread-spectrum data acquisition
- **Reconfigurable application architecture**
  - Enabling degraded and alternate service capabilities

## IMPACT

- **System-wide survivability**
  - Addresses coordinated malicious attacks, cascading failures, common-mode software failures, terrorism, etc.
  - Invokes alternate application function in bounded time
- **Execution of trusted software on untrusted platform**
  - Protects critical elements of control mechanism
  - Applicable to related areas such as intrusion detection
- **Domain analysis**
  - Determining the issues in defending infrastructure systems
  - Determining the impact of infrastructure failure on society and on Department of Defense operations
  - Analyzing critical military information systems

## SCHEDULE

